UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/751,848	01/02/2001	Jeong-hoon Park	Q62028	9288

7590   02/09/2007
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EXAMINER
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ART UNIT	PAPER NUMBER
2616	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	02/09/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

PTOL-90A (Rev. 10/06)

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address* --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on *14 November 2006.*

2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) *1,2,5-33 and 36-59* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) *1,2,5-33 and 36-59* is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☒ All b)☐ Some * c)☐ None of:

      1.☒ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.

5) ☐ Notice of Informal Patent Application

6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 101

1.   35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

2.   Claims 1, 2, 5 – 28, 32, 33, 36 – 59, are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

Considering claims 32, 33

To determine whether the claimed subject matter complies with the is eligibility requirement of 35 USC 101, we ask

Does the claimed invention fall within an enumerated statutory category?

The answer is "No".

As Evidenced at page 14, lines 5 – 11 of the specification, in "can be written in a program that can be executed in computers, and can be realized in general-use digital computers which operate the program from a medium which is used in computers. The medium includes a magnetic storage medium (for example, a ROM, a floppy disc, a hard disc, and the like), an optical read-out medium such as a carrier-wave (for example, transmission via the Internet)." Thus the claimed application in claims 32, and 33 are nothing but merely a software application embodied in a signal. A signal is non-statutory subject matter.

Thus, claims 32, 33, 36 – 59 are non-statutory, since these claims as a whole are directed to a signal.

As to claims 1, 2, these claims are written in a form of "method". However, as evidenced in claims 32, 33, claims 1 – 28 are claiming software in the form of method. Note that claims 1 and 2 mirrors claims 32, 33 in all respects except for the preamble and in light of the specification it is nothing more than the instructions of the application.

When claim 1 falls within one of the statutory categories, we continue to ask the following question.

Does the claimed invention cover a judicial exception?

The answer is "Yes", i.e. abstract idea - computer program.

. Once the claim covers a judicial exception, we need to determine whether there is a practical application recited in the claim. The final result achieved by claim 1 is to provide a service protocol responsive to receiving a request identifying a value added service protocol. It is clear that 1) there is no physical transformation recited in the claim, and 2) no useful and tangible result recited in the claim. Thus, claims 1- 28, 32 - 59 are also nonstatutory since the patent protection sought by the claimed invention is for the computer program in the abstract.

Claim Rejections - 35 USC § 103

3.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4.   Claims 1, 2, 5 – 28, 32, 36 – 59 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Ludwig (US 6,697,352 B1) and Yi et al. (US 20020001314 A1) in view

of Zhu (US 6,154,780).

Regarding Claims 1, 2, 32, 33, Ludwig discloses the limitation of a method of

transmitting a bit stream in a communication network (recited "generating data packets

(as a bit stream) to be sent out having a first data structure determined by a first

predetermined protocol" as a method of transmitting a bit stream in a communication

network; column 5, lines 26 – 36), the method comprising: (b) adding a header from

each communication protocol layer to a payload while transmitting the bit stream coded

in the step of to each communication protocol layer (recited "passing data through the

layers" as adding a header from each communication protocol layer to a payload; Fig 5,

column 2, lines 10 – 33, column 17, lines 4 – 15); and, wherein in step (c), a bit stream,

to which header information has been added by undergoing each communication

protocol layer (recited "passing data through the layers" as header information has been

added by undergoing each communication protocol layer; Fig 5, column 2, lines 10 – 33,

column 17, lines 4 – 15) is transmitted in an unacknowledged mode protocol (recited "no

unacknowledged numbered mode packets is allowed to be outstanding" as a bit stream

is transmitted in an unacknowledged mode protocol; column 15, lines 50 – 56), and only

the header information in the bit stream is transmitted in an acknowledged mode

protocol (recited "by means of acknowledgement messages" as header information in

the bit stream is transmitted in an acknowledged mode protocol; column 4, lines 13 –

22, Fig. 5, column 14, lines 66 – 67). However, Ludwig does not disclose explicitly the

limitation of only the header information in the bit stream is separately transmitted in

acknowledged mode protocol. Yi et al. disclose the limitation of only the header

information in the bit stream is separately transmitted in acknowledged mode protocol

("acknowledged mode or unacknowledged mode" and transmitted separately"; Abstract,

page 1, paragraph [0012], page 2, paragraph [0026]). It would have been obvious to

one of ordinary skill in the art at the time the invention was made to modify Ludwig to

include only the header information in the bit stream is separately transmitted in

acknowledged mode protocol such as that taught by Yi et al. in order to generating

protocol data units in a split mode of a radio link control layer and transmitting them

separately to a lower layer through a pair of different channels as suggested by Yi et al.

(see column 1, lines 9 – 11) to reduce error rate. Both Ludwig and Yi et al. do not

disclose explicitly (a) coding source data into the bit stream using a predetermined type

of coding. Zhu discloses the limitation of (a) coding source data into the bit stream using

a predetermined type of coding (column 1, lines 33-34 — using H.263 representing a

picture in an encoded video bitstream). Therefore, it would have been obvious to modify

both Ludwig and Yi et al. to include coding source data into the bit stream using a

predetermined type of coding as that taught by Zhu in order to create a flexible bitstream

that may be efficiently packetized for a variety of transport protocols (as suggested by

Zhu, see column 3, lines 26 – 27).

Regarding claims 5, 6, 36, 37, Ludwig discloses the limitation of when the number

of times of re-transmission of a bit stream transmitted in an acknowledged mode protocol

is equal to or less than a predetermined number of times, the bit stream, which has been

transmitted in an unacknowledged mode protocol, is transmitted in an acknowledged

mode protocol (recited "moving up to next protocol layer for a predetermined number of

times, where the exceeding of said predetermined numbers of times leads to a default

mode" as the number of times of re-transmission of a bit stream transmitted in an

acknowledged mode protocol is equal to or less than a predetermined number of times;

column 12, lines 41 – 50).

Regarding claims 7, 8, 9, 38, 39, 40, Ludwig discloses the limitation of the header

information in the bit stream be simultaneously transmitted in an acknowledged mode

protocol with the bit stream (column 14, lines 66-67). He also teaches that the header

information in the bit stream is simultaneously transmitted in an acknowledged mode

protocol with the payload (column 15, lines 6-12). And the header information in the bit

stream is simultaneously transmitted in the unacknowledged mode protocol with the bit

stream (column 14, lines 62-64).

Regarding claims 10, 41, Ludwig discloses that as a transmission error occurs, the

bit stream, to which headers have been added by undergoing each communication

protocol layer, is re-transmitted in an acknowledged or unacknowledged mode protocol

(recited "protocol provides a numbered reliability mode and an unnumbered reliability

mode" as each communication protocol layer, is re-transmitted in an acknowledged or

unacknowledged mode protocol; column11, lines 48-57).

Regarding Claims 11,12, 13, 14, 15, 16, 42, 43, 44, 45, 46, 47, Ludwig teaches

the acknowledged mode protocol being a transmission control protocol (TCP), and the

unacknowledged mode protocol being a user datagram protocol (UDP) (recited "by

means of acknowledgement messages" as header information in the bit stream is

transmitted in an acknowledged mode protocol; column 4, lines 13 – 22, Fig. 5, column

14, lines 66 – 67, Column 6, lines 24-26; lines 35-37; column 11, lines 48-57, Fig 9a and

9b).

Regarding Claims 17, 18, 19, 20, 21, 22, 23, 24 and 48, 49, 50, 51, 52, 53, 54, 55,

Ludwig discloses the limitations of the acknowledged mode retransmitting Internet

Protocol (IP) or Radio Link Protocol (RLP) packets (recited "acknowledgment packages"

as acknowledged mode retransmitting; Column 11, lines 50-57; recited "RLP packets of

the numbered mode that are to be retransmitted" as Radio Link Protocol (RLP); column

13, lines 60-63).

Regarding Claims 25, 26, 56,57 Ludwig discloses the limitations of the headers

are a payload header, a real time protocol (RTP) header, a user datagram protocol

(UDP) or transmission control protocol (TCP) header, an Internet protocol (IP) header, a

radio link protocol (RLP) header, and a layer 2 (L2) header, which are added after a bit stream is passed through each layer (column 6, lines 15-26, Fig.5 and Fig.6)

Regarding claims 27, 28 and 58, 59, Ludwig discloses the payload includes multimedia data (recited "real-time data streams" as payload includes multimedia data; column 6, lines 60-65; column 17, lines 18-19).

Regarding Claim 29, Ludwig discloses the limitations of adding the header of each communication protocol layer to a payload while transmitting the bit stream encoded by the encoder to each communication protocol layer (recited "passing data through the layers" as adding the header of each communication protocol layer to a payload; Fig. 5, column 2, lines 10 – 32); and a packet processing unit for transmitting the bit stream processed by the protocol processing unit in an unacknowledged mode protocol (column 6, lines 25 – 26; lines 34 – 37) and transmitting the header information in an unacknowledged or acknowledged mode protocol (Fig 5, column 6, lines 26 – 27; column 12, lines 33 – 34). Both Ludwig and Yi et al. do not disclose explicitly the limitations of an encoder for encoding source data into a bit stream. Zhu discloses the limitations of an encoder for encoding source data into a bit stream (recited " an encoder/decoder (codec) as an encoder for encoding source data; column 6, lines 10-14, Fig 5; lines 5-9). Therefore, it would have been obvious to modify Both Ludwig and Yi et al. to include an encoder for encoding source data into a bit stream such as that taught by Zhu in order to

create a flexible bitstream that may be efficiently packetized for a variety of transport

protocols as suggested by Zhu (see column 3, lines 26 – 27).

Regarding Claims 30 and 31, Ludwig disclose the system for relaying and

receiving a bit stream in a communication network (Fig 6), the system comprising an

extractor for separately extracting payloads and header information, which corresponds

to the header of each layer (Fig. 8; column 9, lines 61 – 65), while transmitting a bit

stream received in a separate transmission protocol in the communication network to

each layer (column 10, lines 33 – 36); an error determination processing unit for

determining whether the header information extracted by the extractor has error (column

10, lines 20-27, column 16, lines 24 – 34); a bit stream re-organizing unit for re-

organizing a bit stream using the header information extracted by the extractor; and a

decoder for decoding a bit stream re-organized by the bit stream re-organizing unit

(column 14, lines 46-51). He also teaches the system having the error determination

processing unit also requests re-transmission if it is determined that the header

information has error (column 13, lines 2-7), an extractor for separately extracting

payloads and header information, which corresponds to the header of each layer (column

9, lines 61-65), while transmitting a bit stream received in a separate transmission

protocol in the communication network to each layer (column 10, lines 33-36); However,

Ludwig et al. do not disclose explicitly receiving a bit stream and a header information

received in an acknowledged or unacknowledged mode protocol in the communication

network to each layer. Yi et al. disclose the limitation of receiving a bit stream and a

header information received in an acknowledged or unacknowledged mode protocol in

the communication network to each layer ("acknowledged mode or unacknowledged

mode" and "transmitted separately"; see Abstract; page 1, paragraph [0012]; page 2,

paragraph [0026]). It would have been obvious to one of ordinary skill in the art at the

time the invention was made to modify Ludwig to include receiving a bit stream and a

header information received in an acknowledged or unacknowledged mode protocol in

the communication network to each layer such as that taught by Yi et al. in order to a

method of generating protocol data units in a split mode of a radio link control layer and

transmitting them separately to a lower layer through a pair of different channels as

suggested by Yi et al. (see column 1, lines 9 – 11).

Response to Arguments

5.   Applicant's arguments filed on 11/14/2006 with respect to claims 1, 2, 5 – 33, 36 –

39 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

6.   The prior art made of record and not relied upon is considered pertinent to

applicant's disclosure.

- Le (US 6466585 B1) disclose an apparatus, and associated method, converts

   real-time multimedia information generated pursuant to an RTP protocol into a

   form amenable for transmission upon a radio channel, such as a radio

   channel defined in a cellular communication system.

- Jonsson et al. (US 6700888 B1) disclose in packet communication paths that include header compression, header fields of packets to be communicated are altered. The alteration of the header fields does not disturb their functionality, and is transparent to the header compression scheme of the packet communication path.

- Le (US 6680955 B1) disclose a timer based header compression/decompression technique and timer and reference based technique are provided. A source generates a header field, such as an RTP time stamp.

7.   Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andrew C. Lee whose telephone number is (571) 272-3131. The examiner can normally be reached on Monday through Friday from 8:30am - 5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wing Chan can be reached on (571) 272-7493. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent

Application Information Retrieval (PAIR) system. Status information for published

applications may be obtained from either Private PAIR or Public PAIR. Status

information for unpublished applications is available through Private PAIR only. For

more information about the PAIR system, see http://pair-direct.uspto.gov. Should you

have questions on access to the Private PAIR system, contact the Electronic Business

Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO

Customer Service Representative or access to the automated information system, call

800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/ACL/   Jan 28, 2007

WING CHAN
SUPERVISORY PATENT EXAMINER